



Resource Protection Areas: Nontidal Wetlands

Guidance on the Chesapeake Bay Preservation Area
Designation and Management Regulations

June 18, 2007

Purpose:

This document provides guidance on requirements of the Chesapeake Bay Preservation Areas Designation and Management Regulations (regulations) for determining which nontidal wetlands are required to be part of the Resource Protection Areas.

The regulations establish the Resource Protection Area (RPA) as the shoreward component of Chesapeake Bay Preservation Areas. RPAs are composed of: tidal wetlands; non-tidal wetlands connected by surface flow and contiguous to tidal wetlands or water bodies with perennial flow; tidal shores; such other lands considered necessary by the locality to protect the quality of state waters; and a 100-foot wide vegetated buffer adjacent to, and landward of, these features.

Within areas covered by the regulations, it is not completely clear to many local governments and wetland professionals how a distinction should be drawn between nontidal wetlands that are required for inclusion in the RPA and other nontidal wetlands, where the inclusion as RPA features is optional at the discretion of a local government. Questions have been raised regarding the definitions or terms of “contiguous” and “connected by surface flow” and the extent to which whole wetland systems meeting these criteria must be included in RPAs. The focus of this document is to provide guidance on determining which nontidal wetlands the regulations require to be included as part of the RPA.

This document addresses the following nontidal wetlands situations:

- Nontidal Wetlands Connected by Surface Flow and Contiguous to a Tidal Wetland
- Nontidal Wetlands Connected by Surface Flow and Contiguous to a Water Body with Perennial Flow
- Nontidal Wetlands Separated By a Levee
- Interrupted and Disconnected Nontidal Wetlands
- Nontidal Wetlands Associated With Lakes, Ponds and Other Impoundments
- Nontidal Wetlands Associated with Intermittent Streams or Other Non-Perennial Conveyances

Background:

Wetlands are found throughout the United States and can be classified into two main groups:

1) coastal or tidal wetlands and; 2) inland or nontidal wetlands. Tidal wetlands are largely comprised of coastal salt and brackish marshes, mudflats, mangroves (tropical maritime trees or shrubs) and other swamps subjected to periodic tidal influence.

Nontidal wetlands principally include freshwater marshes, ponds, shrub and wooded swamps, bogs, and bottomland hardwood forests. Nontidal wetlands represent a complex assemblage of inland wet environments. Wetlands falling under the jurisdiction of the US Army Corp of Engineers

and the Virginia Department of Environmental Quality are delineated by trained experts. For classification purposes, wetlands are subdivided into five primary systems: marine, estuarine, riverine, lacustrine (lakes and ponds) and palustrine (swamps and marshes).

Wetlands in their natural state perform ecological functions that are important to the environment and are costly to replace. Wetlands protect the quality of surface waters by retarding the erosive forces of moving water. They provide a natural means of flood control by reducing flood peaks, thereby protecting against loss of life and property. Wetlands also improve water quality by intercepting and filtering out waterborne sediments, excess nutrients, heavy metals and other pollutants.

Regulatory Framework:

- Section 9 VAC 10-20-40 defines nontidal wetlands as: "... those wetlands other than tidal wetlands that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, as defined by the U.S. Environmental Protection Agency pursuant to § 404 of the federal Clean Water Act, in 33 CFR 328.3b."
- Section 9 VAC 10-20-80 (B) (2) requires nontidal wetlands connected by surface flow and contiguous to tidal wetlands or water bodies with perennial flow to be designated as a component of RPAs.
- Section 9 VAC 10-20-80 (B) (5) requires the 100-foot buffer to be designated as the landward component of the RPA, notwithstanding the presence of permitted uses, encroachments, and permitted vegetation clearing.
- Section 9 VAC 10-20-105 requires site-specific boundaries of RPAs to be established or confirmed by a local government as part of their plan-of-development review process.

Definitions:

The following definitions will be used for the purpose of interpreting these terms as they relate to the requirements in the regulatory sections discussed above:

- **Contiguous** shall mean touching along a boundary or at a point (as determined by the 1992 Report by the Board-appointed Chesapeake Bay Preservation Act Program Study Group.)
- **Surface Flow** shall mean water moving across the ground surface from ground water seeps or springs and/or wetland drainage (which may include runoff resulting from rainfall events), either overland or through a channel.

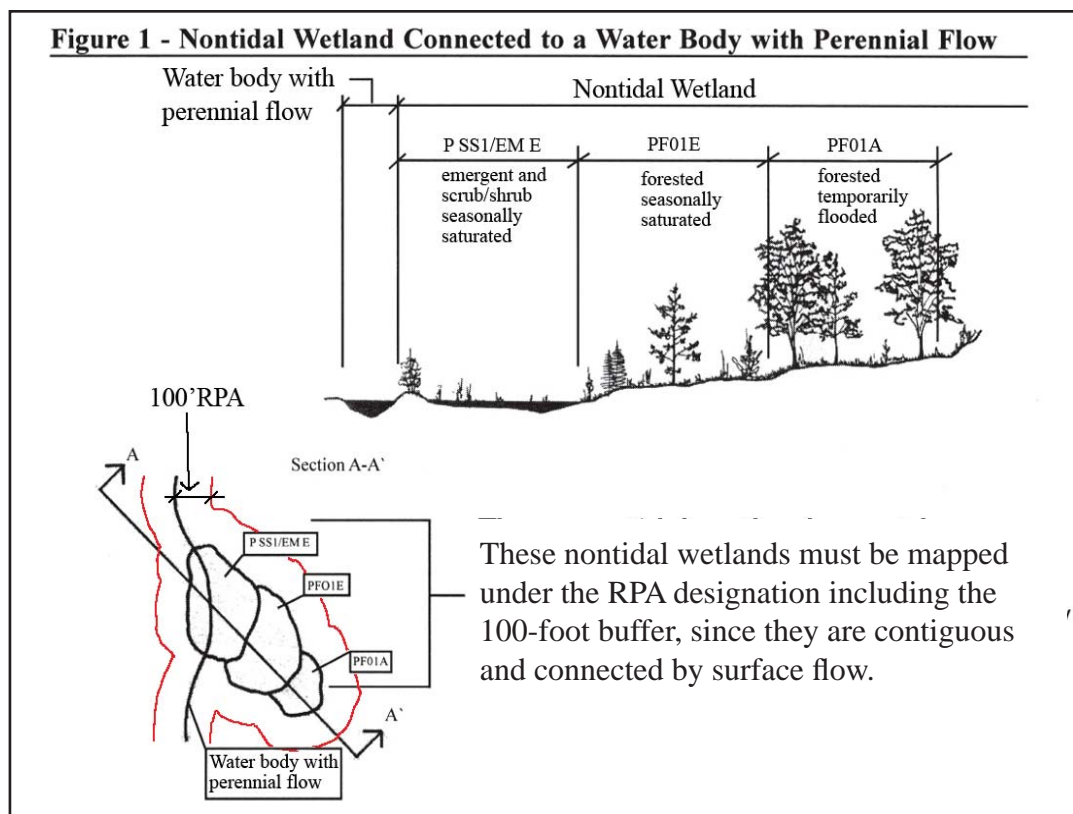
Discussion:

The regulations state that the designation of RPAs must include tidal wetlands, as well as nontidal wetlands, which are both contiguous and connected by surface flow to either tidal wetlands or water bodies with perennial flow.

A 1992 Report by the Board-appointed Chesapeake Bay Preservation Act Program Study Group determined that “contiguous” means touching. For the purposes of this interpretation, Figure 1 illustrates a contiguous nontidal wetland that meets the federal definition of a wetland established in the Corps of Engineers Wetland Delineation Manual (Technical Report Y-87-1, Waterways Experiment Station, January 1987 hereafter referred to as the 1987 Manual). The 1987 Manual is the officially recognized basis for Corps regulatory wetland determinations. The fact that the wetland in Figure 1 has been subdivided according to the U.S. Fish and Wildlife Service National Wetland Inventory (NWI) Classification system has no bearing on the contiguity of the wetland community in question, since the contiguous polygons represent a wetland system that meets the Corps definition.

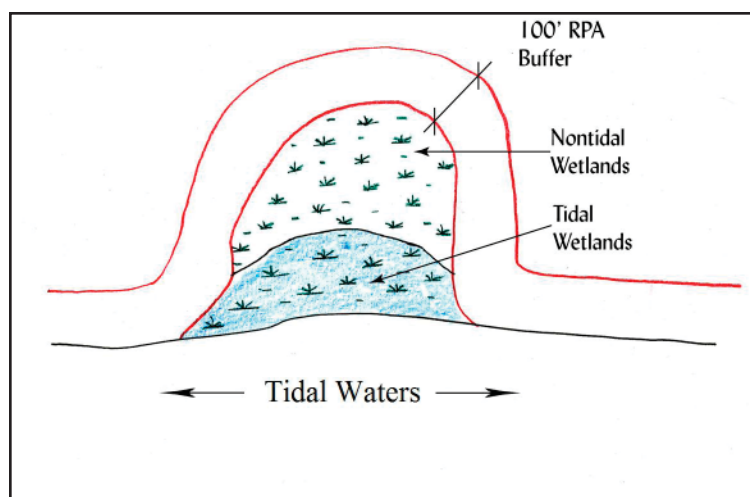
Since the regulations require that RPAs must include only those nontidal wetlands that are both connected by surface flow and contiguous to tidal wetlands or water bodies with perennial flow, it is clear that not all nontidal wetlands that have been determined to be subject to the jurisdiction of the US Army Corps of Engineers are required to be included as a component of a Resource Protection Area. Figure 1 below is a general depiction of required RPA nontidal wetlands. However, the regulations provide, through the “other lands” provision, that a local government has the discretion to include all nontidal wetlands as part of an RPA if the locality determines that they are necessary to protect the quality of state waters and if they are specifically described as an RPA component in their local ordinance. [Section 9 VAC 10-20-80 (4)]

The following discussion addresses six nontidal wetland situations that are most typically encountered and provides guidance on those situations. Applying the guidance will always involve a site evaluation and the nontidal wetland determinations must be based on specific site conditions.



Nontidal Wetlands Connected by Surface Flow and Contiguous to a Tidal Wetland

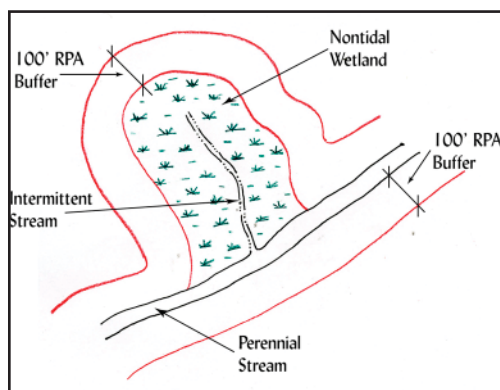
The following addresses the general criteria for designation of nontidal wetlands that are contiguous to tidal wetland components of the RPAs. Figure 2A illustrates a nontidal wetland system which is contiguous to, and connected by surface flow to a tidal wetland. Designation of a nontidal wetland within an RPA should include all nontidal wetlands, which are both contiguous and satisfy a surface flow connection, either singularly or as a continuous unit, to a tidal wetland or water body with perennial flow.



This nontidal wetland is an RPA feature because it is connected by surface flow and is contiguous to a tidal wetland.

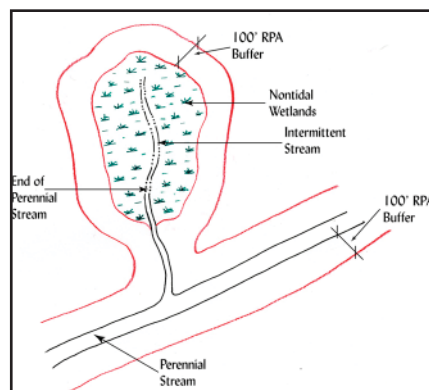
Figure 2A

Nontidal Wetlands Connected by Surface Flow and Contiguous to a Water Body with Perennial Flow



This nontidal wetland is an RPA feature because it is connected by surface flow and contiguous to a water body with perennial flow.

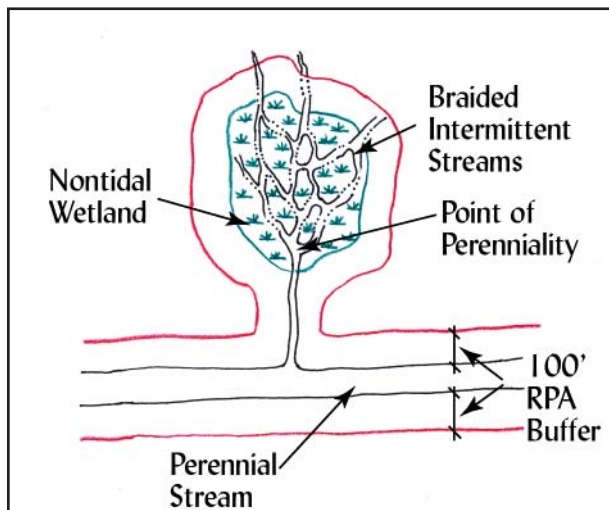
FIGURE 2B



This nontidal wetland is an RPA feature because it is connected by surface flow and is contiguous to a water body with perennial flow.

FIGURE 2C

Figures 2B and 2C demonstrate the same hydrologic connection and contiguity as shown in Figure 2A but this time the wetland is connected to a water body with perennial flow and there is no evidence of tidal wetlands. In these cases, the nontidal wetland demonstrates a hydrologic connection to the water body with perennial flow at some point other than through the intermittent stream channel.

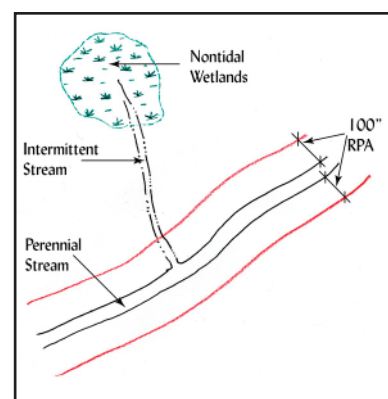


There are circumstances where a wetland that is contiguous and connected by surface flow to a water body with perennial flow continues beyond the point where the stream ceases to be perennial. Figure 2D illustrates the same concept depicting braided intermittent streams. In such cases, these nontidal wetlands are contiguous to water bodies with perennial flow, and a hydrological connection by surface flow will exist during any year of normal rainfall. Such nontidal wetlands should be designated as RPAs.

This nontidal wetland requires an RPA buffer because the wetlands are contiguous and connected by surface flow to the perennial stream.

FIGURE 2D

Conversely, as Figure 2E shows, a nontidal wetland may be contiguous and hydrologically connected to an intermittent stream, yet spatially separated from the water body with perennial flow or other nontidal wetland by an intermittent stream or intermittent channel. Such wetlands are not required to be designated as RPAs because they are not contiguous to the water body with perennial flow. However, a locality may define such wetlands and/or intermittent streams as “other lands,” and designate them within their local ordinances as an RPA component at their discretion provided they do so consistent with Section 9 VAC 10-20-80 4 of the regulations.

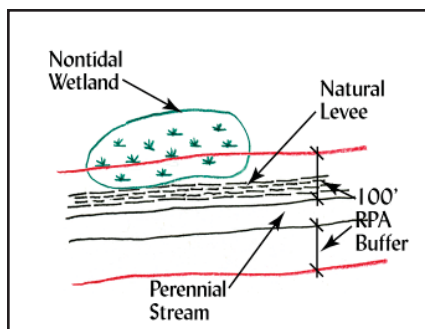


This nontidal wetland is not contiguous to the water body with perennial flow and does not require an RPA buffer.

FIGURE 2E

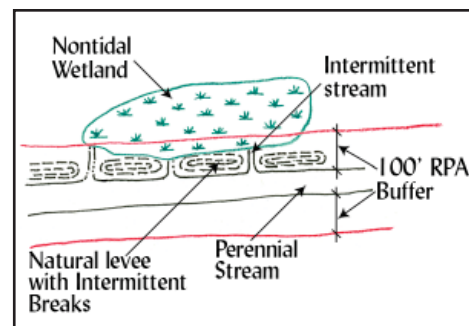
Nontidal Wetlands Separated by a Levee

The following addresses nontidal wetlands as an RPA feature when they are separated from a water body with perennial flow by a natural river levee or berm, which is not a wetland itself and therefore separates the wetland from the stream channel. The formation of a raised depositional area adjacent to the bank of a stream or river channel can range from almost imperceptible on small streams to very high and wide along major rivers. The designation is centered on the two requirements for nontidal wetlands that the regulations require be included in the RPA: that the wetland be part of a system that is (1) connected by surface flow; and (2) contiguous to (touching) a tidal wetland or perennial stream (Figures 3A and 3B). Such nontidal wetlands are not required to be included as RPA features.



The natural levee separates the nontidal wetland from the perennial stream, so it is not contiguous to a perennial waterbody and does not require the RPA buffer.

FIGURE 3A



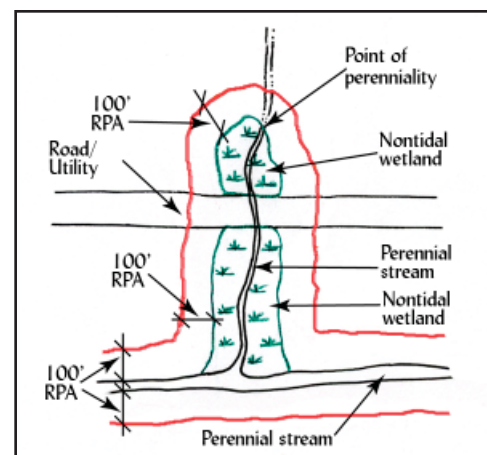
This nontidal wetland is not connected by a water body with perennial flow, so it does not require the RPA buffer.

FIGURE 3B

Interrupted and Disconnected Nontidal Wetlands

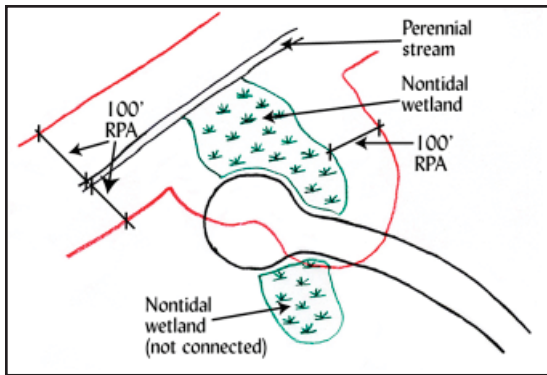
The following addresses the inclusion of nontidal wetlands as an RPA feature when the wetlands are interrupted by man-made obstructions (such as roads, levees, utility lines and crossings, etc.) In these instances, the wetland was one contiguous system prior to the man-made interruption, so the contiguity requirement would have been evident prior to the interruption. See Figures 4A and 4B for depictions of this situation. As a result of the interruption, the separated portions of the wetland may or may not remain connected by surface flow through a pipe, culvert, or other conveyance.

Nontidal wetlands that have been interrupted by man-made obstructions, but remain connected by surface



While this wetland has been interrupted by a road, it is still connected by surface flow and remains an RPA feature.

FIGURE 4A



This wetland was interrupted prior to October 1, 1989. There is no surface flow connecting the two wetlands, so the disconnected wetland is not an RPA feature.

FIGURE 4B

prior to land disturbance, and the development activity should not be used to remove or diminish the RPA. Thus, where the interruption occurred subsequent to October 1, 1989, the entire wetland should be treated as an RPA feature and subject to the 100-foot buffer.

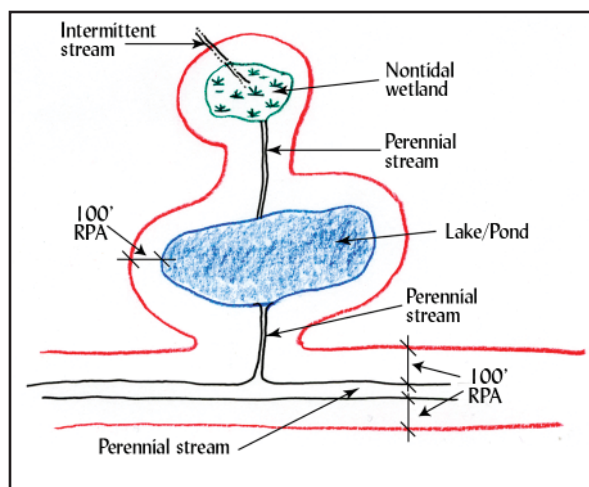
flow should be included as RPA features.

There are also situations where the interrupted wetland is not connected by surface flow at all. In these instances, the question is whether the disconnected portion of the wetland should be included as part of the RPA and subject to the 100-foot buffer given that it may no longer be contiguous or connected by surface flow.

The regulations provide clarity under Section 9 VAC 10-20-80 (B) (5), which notes that the 100-foot buffer is not diminished when permitted uses, encroachments and removal of vegetation occurs. Under this subsection, post Bay Act interruptions should not diminish the original RPA, as the RPA should be determined based on the condition of the RPA feature that existed

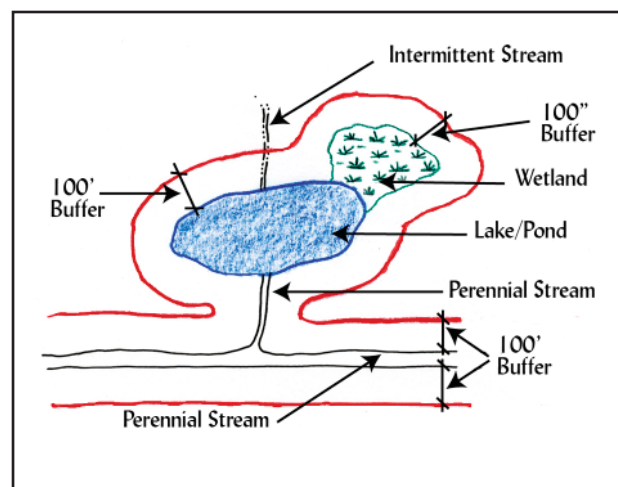
Nontidal Wetlands Associated with Lakes, Ponds and Other Impoundments

The following addresses situations where there are wetlands adjacent to, or associated with, ponds, lakes, or other impoundments. Impoundments with perennial streams flowing either into or out of them, should be included as RPA features, requiring the 100-foot buffer. Likewise, any associated wetland as described in this guidance document should be considered an RPA feature, and also require the 100 foot buffer.



The nontidal wetlands are connected by a perennial stream that enters and leaves the pond. The entire system requires the 100-foot RPA buffer.

FIGURE 5A



This pond has perennial flow coming from it and an associated non-tidal wetland. Both require the 100-foot RPA buffer.

FIGURE 5B

Figures 5A and 5B show examples of other impoundments and associated wetlands.

Nontidal Wetlands Associated with Intermittent Streams or Other Non-Perennial Conveyances

The following addresses situations where nontidal wetlands exist solely along the edges of an intermittent or ephemeral stream, or other non-perennial conveyance, and when they are located only within the defined bed and bank, or on the bottom of such stream or conveyances. These wetlands may provide hydrologic input to the intermittent or ephemeral stream or non-perennial conveyance, or they may exist as a result of inundation due to storm events. These wetland/stream/conveyance features often exist in areas with little topographic relief, and may hold water for long periods of time given the depth to ground water of low-lying areas. These streams or conveyances may become heavily vegetated in the spring or summer months which may make on-site designation between stream and wetlands inconsistent depending on the time of year. These wetlands are not required to be included as RPA features, although they may be included as “other lands” within their local ordinance at the discretion of a local government provided they do so consistent with Section 9 VAC 10-20-80 4 of the regulations. Figures 6A and 6B illustrate the described situation.

Finally, as noted in the guidance documents entitled “Determinations of Water Bodies with Perennial Flow” and “Administrative Procedures for the Designation and Refinement of Chesapeake Bay Preservation Area Boundaries,” ditches that are located within the right of way of a public road are not required to be considered as RPA features. These ditches are considered to be exempt as they are con-

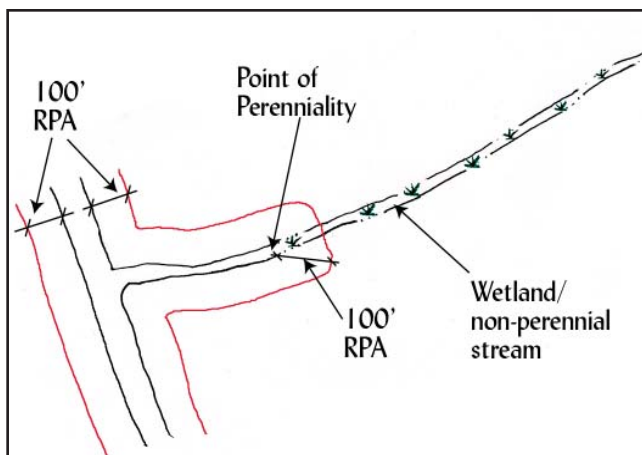


FIGURE 6A

The RPA is required along both sides of the perennial stream, but not along both sides of the intermittent stream with narrow wetlands.

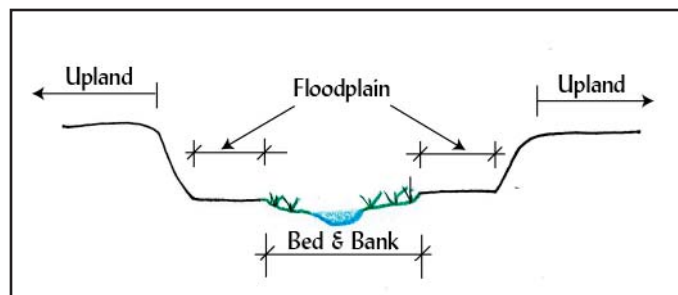


FIGURE 6B

Cross section of an elongated nontidal wetland that is not required to be included as an RPA feature.